Reaching Those in Need:

STATE FOOD STAMP PARTICIPATION RATES IN 2000

The Food Stamp Program is a central component of American policy to alleviate hunger and poverty. The program's main purpose is "to permit low-income households to obtain a more nutritious diet . . . by increasing their purchasing power" (Food Stamp Act of 1977, as amended). The Food Stamp Program is the largest of the domestic food and nutrition assistance programs administered by the U.S. Department of Agriculture's Food and Nutrition Service. During fiscal year 2002, the program served over 19 million people in an average month at a total annual cost of over $18 billion in benefits. The average monthly food stamp benefit was about $185 per household.

Although the costs of the Food Stamp Program and other assistance programs are scrutinized during federal budget debates, the Government Performance and Results Act calls for policymakers to pay close attention to the effects of programs, not just total dollars spent. One important measure of a program's performance is its ability to reach its target population. The national food stamp participation rate – the percentage of eligible people in the United States who actually participate in the program – has been a standard for assessing performance for over 15 years. Recent studies have also examined participation rates for socioeconomic and demographic subgroups of the national population (Cunnyngham 2002) and rates for States (Schirm and Castner 2002b). The Food and Nutrition Service's Strategic Plan for 2000 to 2005 calls for continued monitoring and includes a performance target to "increase the rate of . . . program participation among eligible people."

This document presents estimates of food stamp participation rates for States as of September 2000. These estimates can be used to assess recent program performance and focus efforts to improve performance.

Participation Rates in 2000

About 59 percent of eligible people in the United States received food stamps in September 2000. Participation rates varied widely from State to State, however, with some rates under 50 percent and some over 70 percent. Eighteen States had rates that were significantly higher (in a statistical sense) than the national rate, and 14 States had rates that were significantly lower. Among the regions, the Midwest, Mid-Atlantic, and Mountain Plains Regions had participation rates that at 66, 63, and 63 percent, respectively, were significantly higher than the rates for the other regions. The 54 and 55 percent rates for the Southwest and Western Regions were significantly lower than the rates for the other regions. (See the last page for a map showing regional boundaries.)

State Comparisons

The estimated participation rates presented here are based on fairly small samples of households in each State. Although there is substantial uncertainty associated with the estimates for some States and with comparisons of estimates from different States, the estimates for 2000 show whether a State's participation rate was probably at the top, at the bottom, or in the middle of the distribution. Hawaii, the District of Columbia, and West Virginia were very likely at the top, with higher rates than the other States. In contrast, Nevada likely had a lower rate than most States. Massachusetts, Idaho, Arizona, Texas, Delaware, New Hampshire, Utah, Florida, North Carolina, New Jersey, and California probably fell in the bottom half of the distribution, while Maine, Missouri, Michigan, Kentucky, Alaska, Oregon, Vermont, Tennessee, Illinois, Pennsylvania, and Louisiana were probably in the top half in 2000.

How a State compares with other States may fluctuate over time due to statistical variability in estimated rates and true changes in rates. The statistical variability is sufficiently great that a large change in a State's rate from the prior year should be interpreted cautiously, as should differences between the rates of that State and other States. It may be incorrect to conclude that program performance in the State has improved or deteriorated dramatically. Despite this uncertainty, the estimated participation rates suggest that some States have fairly consistently been in the top or bottom of the distribution of rates in recent years. In all three years from 1998 to 2000, Hawaii, the District of Columbia, West Virginia, and Maine had significantly higher participation rates than two-thirds of the States, and Michigan, Alaska, Tennessee, and Pennsylvania had significantly higher rates than half of the States. Kansas, California, and Utah had significantly lower rates than half of the States in all three years, and New Hampshire, Texas, Arizona, Idaho, Massachusetts, and Nevada had significantly lower rates than two-thirds of the States.

Estimation Method

The estimates presented here were derived using shrinkage estimation methods (Schirm and Castner, 2002a, and Castner and Schirm, forthcoming). Drawing on data from the Current Population Survey, the decennial census, and administrative records, the shrinkage estimator averaged sample estimates of participation rates with predictions from a regression model. The predictions were based on observed indicators of socioeconomic conditions, such as the percentage of the total State population receiving food stamps. Shrinkage estimates are substantially more precise than

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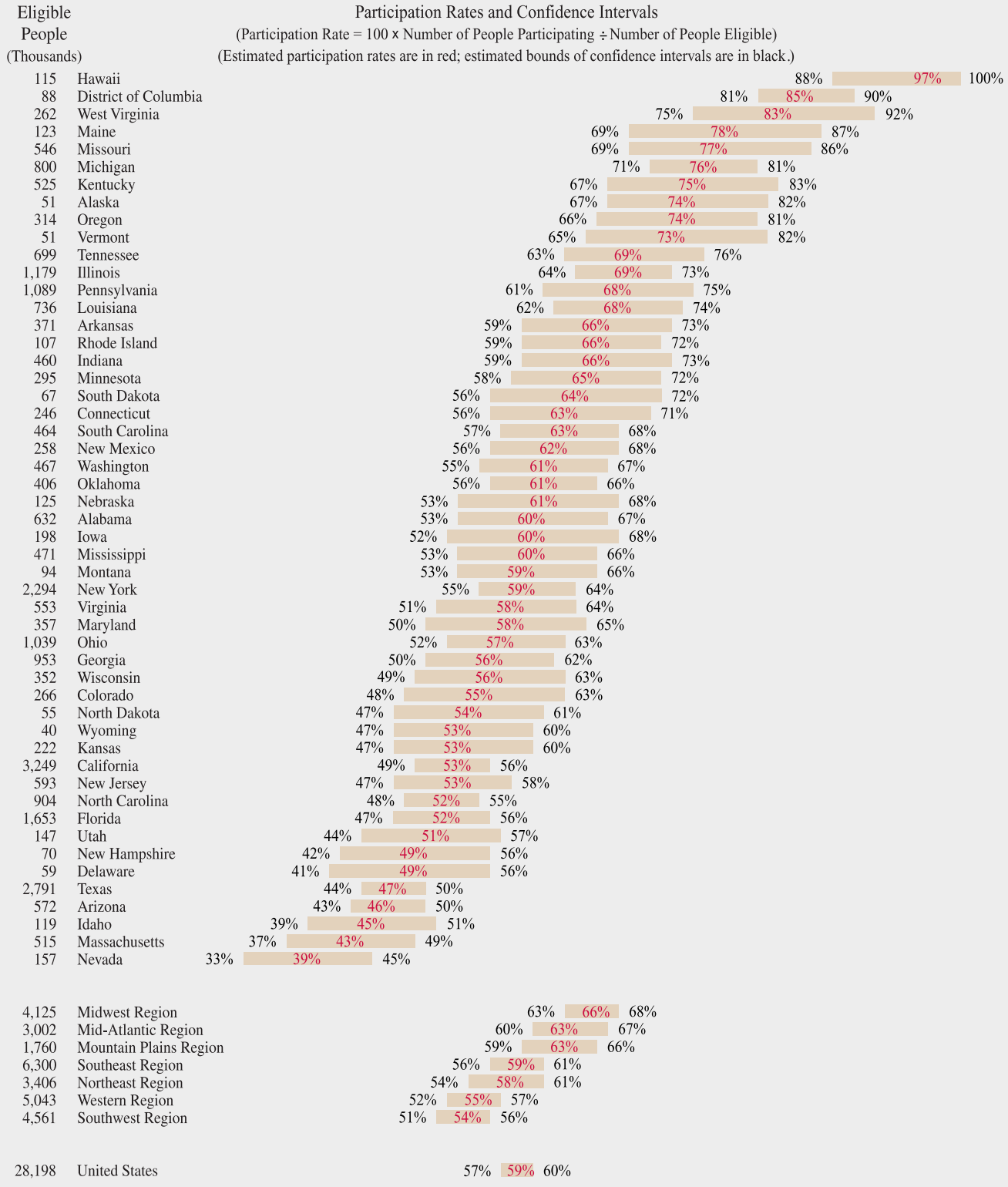
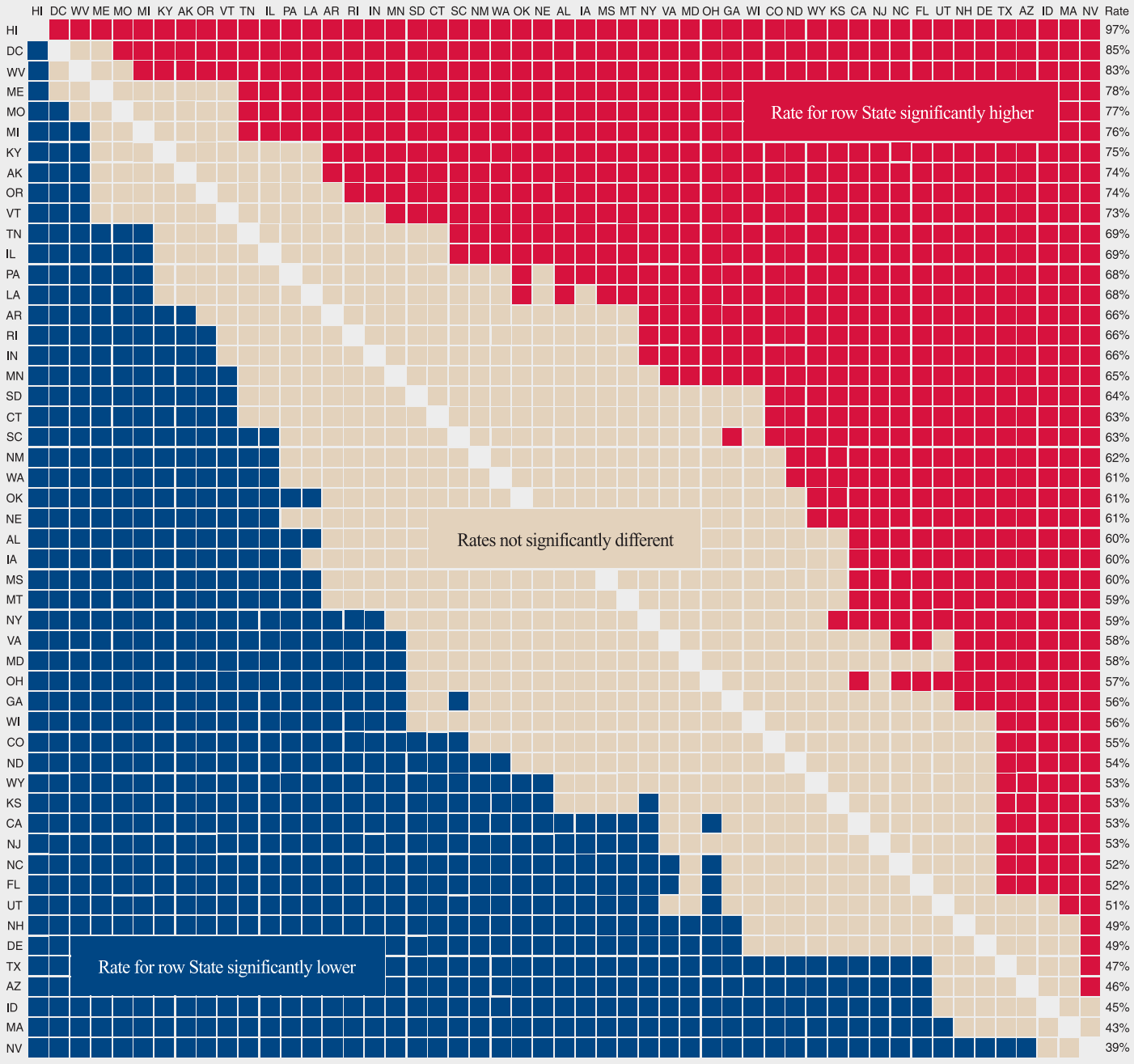
How Many Were Eligible in September 2000? What Percentage Participated?



A confidence interval expresses our uncertainty about the true value of a participation rate. Each interval displayed here is a 90 percent confidence interval. One interpretation of such an interval is that there is a 90 percent chance that the true participation rate falls within the estimated bounds. For example, while our best estimate is that Alabama's participation rate was 60 percent in September 2000, the true rate may have been higher or lower. However, the chances are 90 in 100 that the true rate was between 53 and 67 percent.

How Did Your State Compare with Other States in September 2000?



Whether one State has a significantly higher participation rate than a second State can be determined from this figure by finding the row for the first State at the left of the figure and the column for the second State at the top of the figure. If the box where the row and column intersect is red, there is at least a 90 percent chance that the first State (the row State) has a higher true participation rate. If the box is blue, there is at least a 90 percent chance that the second State (the column State) has a higher true participation rate. Equivalently, there is less than a 10 percent chance that the first State has a higher rate. If the box is tan, there is more than a 10 percent chance but less than a 90 percent chance that the first State has a higher rate; thus, we conclude that neither estimated rate is significantly higher.

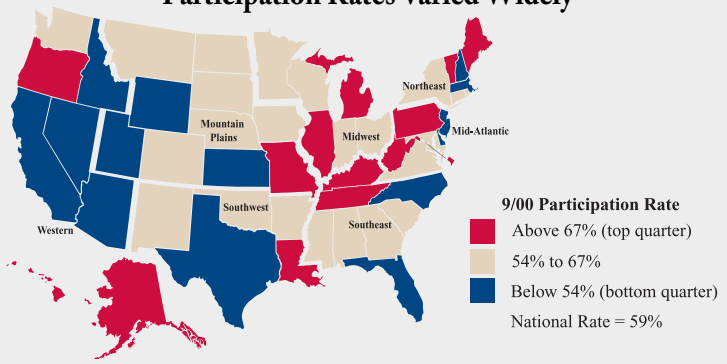
Taking Alabama, the State in the middle of the distribution, as an example, we see that it had a significantly lower participation rate than 14 other States (Hawaii, the District of Columbia, West Virginia, Maine, Missouri, Michigan, Kentucky, Alaska, Oregon, Vermont, Tennessee, Illinois, Pennsylvania, and Louisiana) and a significantly higher rate than 12 other States (California, New Jersey, North Carolina, Florida, Utah, New Hampshire, Delaware, Texas, Arizona, Idaho, Massachusetts, and Nevada). Its rate was neither significantly higher nor significantly lower than the rates for the other 24 States, suggesting that Alabama was probably in the broad center of the distribution, unlike, for example, Hawaii and Nevada, which were surely at or near the top and bottom of the distribution, respectively. Although we use the statistical definition of "significance" here, most of the significant differences were at least ten percentage points, and all of them were at least five percentage points, a difference that seems important as well as significant.

Participation Rates

	1998	1999	2000
Alabama	58%	61%	60%
Alaska	74%	69%	74%
Arizona	47%	46%	46%
Arkansas	65%	69%	66%
California	55%	52%	53%
Colorado	60%	54%	55%
Connecticut	67%	62%	63%
Delaware	58%	53%	49%
District of Columbia	89%	100%	85%
Florida	53%	53%	52%
Georgia	58%	57%	56%
Hawaii	95%	98%	97%
Idaho	44%	42%	45%
Illinois	67%	65%	69%
Indiana	62%	60%	66%
Iowa	60%	56%	60%
Kansas	47%	42%	53%
Kentucky	68%	74%	75%
Louisiana	65%	70%	68%
Maine	80%	79%	78%
Maryland	69%	57%	58%
Massachusetts	48%	43%	43%
Michigan	77%	69%	76%
Minnesota	64%	60%	65%
Mississippi	57%	59%	60%
Missouri	68%	71%	77%
Montana	56%	55%	59%
Nebraska	66%	60%	61%
Nevada	42%	34%	39%
New Hampshire	46%	46%	49%
New Jersey	59%	56%	53%
New Mexico	64%	64%	62%
New York	59%	61%	59%
North Carolina	52%	53%	52%
North Dakota	53%	51%	54%
Ohio	58%	54%	57%
Oklahoma	64%	64%	61%
Oregon	65%	66%	74%
Pennsylvania	70%	68%	68%
Rhode Island	64%	69%	66%
South Carolina	63%	62%	63%
South Dakota	62%	59%	64%
Tennessee	71%	72%	69%
Texas	51%	46%	47%
Utah	53%	50%	51%
Vermont	69%	77%	73%
Virginia	60%	57%	58%
Washington	63%	56%	61%
West Virginia	86%	89%	83%
Wisconsin	51%	48%	56%
Wyoming	53%	48%	53%
Northeast Region	59%	59%	58%
Mid-Atlantic Region	68%	64%	63%
Southeast Region	58%	59%	59%
Midwest Region	65%	61%	66%
Southwest Region	56%	54%	54%
Mountain Plains Region	60%	58%	63%
Western Region	56%	53%	55%
United States	60%	58%	59%

There is substantial uncertainty associated with most of these estimates. Confidence intervals that measure the uncertainty in the estimates for 1998 and 1999 are presented in Castner and Schirm (forthcoming). Those confidence intervals are generally about as wide as the confidence intervals that are presented in this document for the 2000 estimates.

Participation Rates Varied Widely



direct sample estimates from the Current Population Survey or the Survey of Income and Program Participation, the leading sources of current data on household incomes and program eligibility. Because these surveys do not collect data on participation in the Food Distribution Program on Indian Reservations, the estimates presented here are not adjusted to reflect the fact that participants in that program are not eligible to receive food stamps at the same time (Cunnyngham 2002). The effects of such adjustments would generally be negligible. The estimates of eligible people were adjusted using available data to reflect the fact that Supplemental Security Income recipients in California are not eligible to receive food stamps because they receive cash instead.

The shrinkage estimates of participation rates for 1998 and 1999 presented here differ from the estimates in Schirm and Castner (2002a and 2002b). The differences are due to improvements in data and methods, which are described in Cunnyngham (2002) and Castner and Schirm (forthcoming). One improvement is that data for 2000 were available and were used with previously available data to derive estimates for the earlier years. The 2000 data were used because socioeconomic conditions in one year are related to conditions in other years – both earlier and later. Thus, the shrinkage estimator uses data for all of the years for which estimates are sought to obtain the most accurate estimates for each year. Before 2000 data became available, 1999 data were the most recent data used in deriving estimates for 1998 and 1999. When 2000 data became available, they were used to derive the first estimates for 2000 and revised estimates for 1998 and 1999. In the future, some of the estimates presented here will be revised – and improved – using data for 2001 and subsequent years.

References

Castner, Laura A., and Allen L. Schirm. "Empirical Bayes Shrinkage Estimates of State Food Stamp Participation Rates for 1998-2000." Washington, DC: Mathematica Policy Research, Inc., forthcoming.

Cunnyngham, Karen. "Trends in Food Stamp Program Participation Rates: 1994 to 2000." In *Current Perspectives on Food Stamp Program Participation*. Alexandria, VA: Food and Nutrition Service, U.S. Department of Agriculture, June 2002.

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